

case that any explosion of the body or damage of terminal is not perceived, table counts successful interruption.

This table has confirmed the utilization of shock wave in the breaking test.

Table 1

| Types of fuselink   | Tested numbers | Arc duration time<br>(millisecond) | Succesfully interrupted number of fuselink | Percentage of Successfully interrupted fuselink |
|---|----------------|------------------------------------|--|---|
| Conventional cartridge fuselink filled with sand                                | 30 pieces      | Av. 4.5                            | 11 pieces                                  | 37%   |
| Invented cartridge fuselink filled with sand as the second preferred embodiment | 30 pieces      | Av. 1.1                            | 30 pieces                                  | 100%  |

#### DESCRIPTION OF THE THIRD PREFERRED EMBODIMENT

A fuselink of current rating 30A is made with the same configuration and same material to embodiment 2.

This fuse was examined by a breaking capacity test of 500V – 1,000A DC, where was no zero cross point.

And as the result, tranquil breaking was accomplished because of utilization of the shock wave, while conventional fuse was broken.

What is claimed is:

1 Method of avoiding arc prolongation while interrupting the current, using the shock wave generated by the arc discharge, including the internal concave wall of the body, comprising paraboloidal concave wall, spheroidal concave wall, hyperboloidal concave wall or other concave walls and polyhedral walls which converge and reflect the shock wave onto the prolonged arc point.

2 Method of forming a cartridge current fuse, comprising conductors, fusible element which is electrically connected to conductors, and nonconductive body wherein inner wall of the conductors or/and fuse body forms the concave which converge and reflect the shock wave generated by the arc discharge to make the focus onto the prolonged arc.